

=> d.bib ab 116 131 151 152 172

L27 ANSWER 116 OF 173 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1993:393383 BIOSIS
DN PREV199396068683
TI A new **amino acid** racemase with threonine alpha-
epimerase activity from *Pseudomonas putida*: Purification and
characterization.
AU Lim, Young-Hee; Yokoigawa, Kumio; Esaki, Nobuyoshi; Soda, Kenji (1)
CS (1) Inst. Chem. Res., Kyoto Univ., Uji, Kyoto-Fu 611 Japan
SO Journal of Bacteriology, (1993) Vol. 175, No. 13, pp. 4213-4217.
ISSN: 0021-9193.
DT Article
LA English
AB We have found that *Pseudomonas putida* ATCC 17642 cells grown in a medium
containing D-threonine as the sole nitrogen source produce an enzyme that
catalyzes epimerization of threonine. Proton nuclear magnetic resonance
analysis of the enzyme reaction in deuterium oxide clearly showed
epimerization from L- to D-allo-threonine and also from D- to
L-allo-threonine. This is the first example of an enzyme that was clearly
shown to epimerize threonine. The enzyme has been purified to
homogeneity,
which was shown by polyacrylamide gel electrophoresis. The enzyme has a
molecular weight of about 82,000 and consists of two subunits identical
in
molecular weight (about 41,000). The enzyme contains 1 mol of pyridoxal
5'-phosphate per mol of subunit as a cofactor, and its absorption
spectrum
exhibits absorption maxima at 280 and 420 nm. The enzyme catalyzes not
only epimerization of threonine by stereoconversion at the alpha position
but also racemization of various **amino acids**, except
acidic and aromatic **amino acids**. The enzyme is similar
to **amino acid** racemase with low substrate specificity
(EC 5.1.1.10) in enzymological properties but is distinct from it in the
action on threonine.

L27 ANSWER 131 OF 173 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1992:176135 BIOSIS
DN BR42:81135
TI PLP-DEPENDENT AND INDEPENDENT **AMINO ACID** RACEMASES.
AU SODA K
CS LAB. MICROBIAL BIOCHEM., INST. CHEM. RESEARCH, KYOTO UNIV., UJI, KYOTO
611, JPN.
SO FUKUI, T., ET AL. (ED.). INTERNATIONAL UNION OF BIOCHEMISTRY SYMPOSIUM,
199. ENZYMES DEPENDENT ON PYRIDOXAL PHOSPHATE AND OTHER CARBONYL
COMPOUNDS
AS COFACTORS; 8TH INTERNATIONAL SYMPOSIUM ON VITAMIN B6 AND CARBONYL
CATALYSIS, OSAKA, JAPAN, OCTOBER 15-19, 1990. XVIII+656P. PERGAMON PRESS:
OXFORD, ENGLAND, UK; NEW YORK, NEW YORK, USA. ILLUS. (1991) 0 (0),
29-34.
ISBN: 0-08-040820-6.
DT Conference
FS BR; OLD
LA English

L27 ANSWER 151 OF 173 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1990:289780 BIOSIS

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(FILE 'HOME' ENTERED AT 16:40:15 ON 26 MAR 2001)

FILE 'BIOSIS' ENTERED AT 16:40:27 ON 26 MAR 2001

L1 2905 S ARTHROBACTER
L2 18700 S KLEBSIELLA
L3 13203 S RHIZOBIUM
L4 0 S SACCHAROPOLYSOPORA
L5 357 S SACCHAROPOLYSPORA
L6 34837 S L1 OR L2 OR L3 OR L5
L7 1753 S EPIMERASE OR RACEMASE
L8 62 S EPIMERIZE OR RACEMIZE OR RACEMISE
L9 2075 S EPIMER#
L10 2136 S L8 OR L9
L11 3867 S L10 OR L7
L12 44 S L6 AND L11
L13 199 S ALANINE RACEMASE
L14 4 S L6 AND L13
L15 19055 S L2 OR L5
L16 251596 S AMINO ACID
L17 771 S L15 AND L16
L18 1800 S RACEMASE# OR EPIMERASE#
L19 8 S L17 AND L18

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	35.23	35.38

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 16:56:15 ON 26 MAR 2001

TI HYDROXY PROLINE 2 EPIMERASE OF PSEUDOMONAS ACTIVE SITE PEPTIDES.
AU ZERVOS C; ADAMS P
SO MOL CELL BIOCHEM, (1975) 8 (2), 113-122.
CODEN: MCBIB8. ISSN: 0300-8177.
FS BA; OLD
LA Unavailable

L15 ANSWER 2 OF 4 CA COPYRIGHT 2001 ACS
AN 109:50529 CA
TI Pyridoxal 5'-phosphate-independent amino acid racemase
AU Nakajima, Nobuyoshi; Soda, Kenji
CS Okayama Junior Coll., Okayama, Japan
SO Kagaku to Kyoiku (1988), 43(3), 212-3
CODEN: KAKYEY
DT Journal; General Review
LA Japanese
AB A review, with 26 refs., on glutamate racemase prepn. and its application to **D-amino acid** synthesis. Reaction mechanisms of coenzyme-independent amino acid racemase and **epimerase** are also discussed.
CC 7-0 (Enzymes)
Section cross-reference(s): 9
ST review amino acid racemase; glutamate racemase pyridoxal phosphate independent review; amino acid prepn glutamate racemase review
IT Amino acids, preparation
RL: PREP (Preparation)
(D-, enzymic, with glutamate racemase)
IT 9024-08-2P, Glutamate racemase
RL: SPN (Synthetic preparation); PREP (Preparation)
(pyridoxal phosphate-independent, purifn. and application to **D-amino acid** prepn. and reaction mechanism of)